

Application No. 09/845,985

REMARKS

Claims 1-4, 6-10, 12, 14-21, 48-50 and 52-61 are pending. By this Amendment, claims 13 and 51 are canceled without prejudice, and claims 1, 12, 17 and 21 are amended. New claims 55-61 are added. Claim 17 is amended to add the range of  $x$  specified in claim 7, as filed. Claim 12 is amended to correct an improper antecedent basis in the claim in view of amendments to claim 1. Claims 1 and 21 are amended to add features from claims 13 and 51, as filed. Thus, the amendment of the claims is supported by the specification as filed. New claims 55 and 58 correspond essentially with previous claims 1 and 21 with features of original claims 15 and 53 added to the claims. New claims 56 and 59 are supported, for example, by claim 3, as filed. New claims 57 and 60 are supported, for example, by claim 5, as filed. New claim 61 is supported by claim 54. The specification is amended to update references to pending applications that have since issued as patents. No new matter is introduced by the amendments.

All of the pending claims stand rejected. Applicants respectfully request reconsideration of the rejection based on the following comments and the above amendments.

Rejection Under 35 U.S.C. § 112, Second Paragraph

The Examiner rejected claims 1-4, 6-10, 12-21 and 48-54 under 35 U.S.C. § 112, second paragraph, as being indefinite. In particular, the Examiner has raised two specific issues. First, the Examiner asserted that the expressions "less than about" and "great than about" are indefinite. Second, the Examiner indicated that the composition  $\text{Li}_x\text{FePO}_4$  was indefinite. Claim 17 was amended to specify the value of  $x$ . Thus, this second issue should be resolved. With respect to the first issue, Applicants maintain that the Examiner has not presented a case for *prima facie* indefiniteness. Applicants respectfully request reconsideration of the rejection based on the following comments.

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As an initial matter, the Examiner stated on page 2 of the office action that as "shown in the MPEP, section 2173.05(b), section (a), the phrase 'at least about' is help indefinite." With all due respect, the MPEP does not say quite what the Examiner indicated. MPEP 2173(b)(A) also indicates specific situations in which a claim with the term "about" is clear in the particular context.

The patent statute at 35 U.S.C. § 112, second paragraph, requires that the "specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." "Whether a claim is invalid for indefiniteness requires a determination whether those skilled in the art would understand what is claimed when the claim is read in light of the specification." Morton International Inc. v. Cardinal Chemical Co., 28 USPQ2d 1190, 1194 (Fed. Cir. 1993).

"The district court, though discussing enablement, spoke also of indefiniteness of 'stretch rate,' a matter having to do with § 112, second paragraph, and relevant in assessment of infringement. The use of stretching \* \* \* at a rate exceeding about 10% per second' in the claims is not indefinite. Infringement is clearly assessable through use of a stop watch." W.J. Gore & Associates, Inc. v. Garlock, Inc., 220 USPQ 303, 316 (Fed. Cir. 1983)(emphasis added). In contrast, when "the meaning of claims is in doubt, especially when ... there is close prior art, they are properly declared invalid." Amgen Inc. v. Chugai Pharmaceutical Co. Ltd., 18 USPQ2d 1016, 1031 (Fed. Cir. 1991). "In arriving at this conclusion, we caution that our holding that the term "about" renders indefinite claims 4 and 6 should not be understood as ruling out any and all uses of this term in patent claims." Id. "The meaning of the word 'about' is dependent on the facts of a case, the nature of the invention, and the knowledge imparted by the totality of the earlier disclosure to those skilled in the art." Eiselstein v. Frank, 34 USPQ2d 1467, 1471 (Fed. Cir. 1995). This last case outlines how the term "about" is generally interpreted in patent claims.

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The fact that scientific measurements have a certain precision associated with them has led one court to conclude that a whole number used to approximate a continuous variable inherently has an approximate nature. See Eiselstein v. Frank, above ("Such a description indicates that Eiselstein knew how to be precise when he intended to, and supports the conclusion that otherwise, when a whole number was stated, a precise amount was not intended.").

It is well established in the case law that the term "about" is interpreted in a claim based on the particular facts of the case. Similarly, the case law has acknowledged the clear fact that continuous variables have a precision associated with them that inherently introduces a range of meaning to a particular number. Thus, a whole number may have meaning with respect to counting numbers of something, but it does not have precise meaning with respect to a continuous variable. Thus, if an object is stated to be 10 inches long, this clearly really means that it is 10 inches +/- some precision related to the measurement in the particular art field. See, e.g., Eiselstein v. Frank, supra.

In summary, the use of the term "about" reflects the natural imprecision in expressing continuous variables with approximate cut off values at a particular precision. This is particularly true with respect to nanotechnology where measurement has particularly clear complications. On a nano-scale, the meaning of the term "about" is related to the capabilities for measurement of the particular characteristic at the time in which the application was filed. Thus, Applicants' claims are clear to a person of ordinary skill in the art at filing.

Since a person of ordinary skill in the art can evaluate the meaning of the claims, the Examiner has not established prima facie indefiniteness of the claims. Applicants respectfully request withdrawal of the rejection of claims 1-4, 6-10, 12-21 and 48-54 under 35 U.S.C. § 112, second paragraph, as being indefinite.

Rejection Under 35 U.S.C. § 102(b) Over Kamauchi et al.

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The Examiner rejected claims 1-4, 6, 7, 10, 12, 16, 17, 19-21 and 48-50 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,538,814 to Kamauchi et al. (the Kamauchi patent). While Applicants maintain that the Kamauchi patent does not teach a person of ordinary skill in the art to form powders with the claimed particle sizes, to advance prosecution of the case, Applicants have amended independent claims 1 and 21 to introduce the uniformity feature of claims 13 and 51, respectively. The Kamauchi patent does not disclose the particle uniformity of the present claims. Therefore, the Kamauchi patent clearly does not render the present claims prima facie anticipated. Since the Kamauchi patent does not render the present claims prima facie anticipated, Applicants respectfully request withdrawal of the rejection of claims 1-4, 6, 7, 10, 12, 16, 17, 19-21 and 48-50 under 35 U.S.C. § 102(b) as being anticipated by the Kamauchi patent.

#### Rejection Over Griffith

The Examiner rejected claims 1-4 and 6 under 35 U.S.C. § 102(b) as being anticipated by EP 031 223A1 to Griffith (the Griffith application). Applicants have amended claim 1 to more particularly point out their claimed invention with respect to particle uniformity. As amended, claim 1 incorporates features from claim 13 as filed. The Griffith application does not disclose particles with the claimed uniformity. Furthermore, from the figure shown in the Griffith application, the fibers are forms as agglomerated masses that would not be separable as individual particles. Since the particles are not separable, the Griffith application does not teach powders with "particles" having the claimed average particle sizes. In view of the above comments, it is clear that the Griffith application does not render Applicants' claims prima facie anticipated. Applicants respectfully request withdrawal of the rejection of claims 1-4 and 6 under 35 U.S.C. § 102(b) as being anticipated by the Griffith application.

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Rejection under 35 U.S.C. § 103(a) Over Kamauchi et al.

The Examiner rejected claims 13-15 and 51-53 under 35 U.S.C. § 103(a) as being unpatentable over the Kamauchi patent. Specifically, the Examiner admits that the Kamauchi patent does not teach or suggest the particle uniformity disclosed and claimed by Applicants in these claims. However, the Examiner asserts that the claimed invention is obvious. With all due respect, Applicants assert that the Examiner's analysis falls short in several respects. Applicants maintain that the Examiner has failed to establish prima facie obviousness. Applicants respectfully request reconsideration of the rejection based on the following comments.

Applicants note that the Examiner's analysis falls short at least because the Examiner has not provided a reasonable motivation for the modification and has not pointed to an approach known in the art to produce the claimed invention. Established principles on motivation to modify the teachings of a reference must be applied when obviousness is based on the teachings of a single cited reference.

In appropriate circumstances, a single prior art reference can render a claim obvious. However, there must be a showing of a suggestion or motivation to modify the teachings of that reference to the claimed invention in order to support the obviousness conclusion. This suggestion or motivation may be derived from the prior art reference itself, from the knowledge of one of ordinary skill in the art, or from the nature of the problem to be solved. **Determining whether there is a suggestion or motivation to modify a prior art reference is one aspect of determining the scope and content of the prior art, a fact question subsidiary to the ultimate conclusion of obviousness.**

Sibia Neurosciences, Inc. v. Cadus Pharmaceutical Corp., 55 USPQ2d 1927, 1931 (Fed. Circuit 2000)(internal citations omitted, emphasis added).

While a reference is prior art for all that it teaches, references along with the knowledge of a person of ordinary skill in the art must be enabling to place the invention in the hands of the public. In re Paulsen, 31 USPQ2d 1671, 1675 (Fed. Cir. 1994). See also In re Donohue, 226 USPQ 619, 621 (Fed. Cir. 1985). "The consistent criterion for determination of

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obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood success, viewed in light of the prior art." Micro Chemical Inc. v. Great Plains Chemical Co., 41 USPQ2d 1238, 1245 (Fed. Cir. 1997)(quoting In Re Dow Chemical Co., 5 USPQ2d 1529, 1531 (Fed. Cir. 1988)).

With respect to the motivation, the Examiner stated on page 4 of the Office Action, "It would be obvious to one of ordinary skill in the art at the time the invention was made to prepare a collection of particles for an electrode material of Kamauchi having a greater number of particles as close in size to the desired average diameter as possible, as the average diameter has been shown to be critical to the invention." With all due respect, there are two flaws with this argument. First, as noted by the Examiner, the reference teaches that it is the "average" size that is critical, while the Examiner is speculating that the uniformity may be significant since the reference does not teach this. Second, the reference teaches a range of average diameters that are useful to the invention, thus the uniformity for a specific average value of size is not critical since the average size itself does not need to be a specific value. In other words, a range of sizes within one particle collection would be consistent with the range of average particle sizes specified in the Kamauchi patent.

With respect to forming the uniform materials, the Examiner comments on page 5 of the Office Action, "One of ordinary skill in the art has the knowledge, based on Kamauchi, to prepare particles of selected sizes by pulverizing the materials. Further, one of ordinary skill in the art would be motivated to choose specific particles of average diameter for the electrode, as particles of this diameter are taught to increase the capacity of the electrode (col. 5, lines 30-35.) The grinding of larger particles will provide particles in the nanometer scale range." However, with all due respect, this statement is not correct. Specifically, during grinding, all of the particles are processed and not just the particles different from the average. There are no nano-tweezers that let a person select the odd particles for grinding or sintering. Also, grinding is well known to be a complex process that cannot lead to arbitrarily small particles. The heat generated during the

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grinding tends to fuse some particles while other particles are pulverized. This complex process is known generally not to lead to uniform particle collections.

Since the Examiner has not provided the requisite motivation to modify the teachings of the references and has fallen short of providing a reasonable expectation of success, the Examiner has not established prima facie obviousness of the Applicants' claimed invention. Applicants respectfully request withdrawal of the rejection of claims 13-15 and 51-53 under 35 U.S.C. § 103(a) as being unpatentable over the Kamauchi patent.

Rejection Over Goodenough et al. and Kamauchi et al.

The Examiner rejected claims 8, 9 and 18 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,910,382 to Goodenough et al. (the Goodenough patent) in view of the Kamauchi patent. The Examiner cited the Goodenough patent for disclosing specific lithium metal phosphates. The Examiner noted that the Goodenough patent does not teach the claimed particle sizes. The Examiner cited the Kamauchi patent for teaching the claimed particle sizes. The Examiner asserted that the teachings of the Kamauchi patent could be used to form the materials of the Goodenough patent with the claimed particle sizes. While Applicants maintain that this assertion with respect to the teachings of the Kamauchi patent is not correct, to advance prosecution of the application, Applicants have amended claim 1, from which claims 8, 9 and 18 depend, to indicate a claimed uniformity. It was noted above that the Kamauchi patent does not teach, suggest or motivate the formation of the highly uniform materials disclosed and claimed by Applicants. Furthermore, there would be no reasonable expectation of success with respect to forming the claimed highly uniform particles based on the teachings of the Kamauchi patent. The Goodenough patent does not address these issues.

Since the cited references alone or together do not teach, suggest or motivate the claimed subject matter and do not provide a reasonable expectation of success, the combined

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teachings of the Goodenough patent and the Kamauchi patent do not render Applicants' claimed invention prima facie obvious. Applicants respectfully request withdrawal of the rejection of claims 8, 9 and 18 under 35 U.S.C. § 103(a) as being unpatentable over the Goodenough patent in view of the Kamauchi patent.

Rejection Over Bodiger et al.

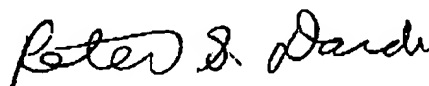
The Examiner rejected claim 54 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,849,827 to Bodiger et al. (the Bodiger patent). Applicants incorporate by reference arguments from the Amendment After Final of April 12, 2004. While Applicants maintain that the Bodiger patent does not place Applicants' claimed invention into the hands of the public, Applicants have amended claim 21 to advance prosecution of the application. Claim 54 depends from claim 21. Claim 21 specifies a particle size uniformity that is not taught, suggested or motivated in the Bodiger patent. Therefore, the Bodiger patent does not render Applicants' claimed invention prima facie obvious. Applicants respectfully request withdrawal of the rejection of claim 54 under 35 U.S.C. § 103(a) as being unpatentable over the Bodiger patent.

CONCLUSIONS

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,



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